IESE
INSTITUTO DE ESTUDOS SOCIAIS E ECONÓMICOS

Food insecurity among female-headed households, rapid food price inflation and economic downturn in Southern Africa

Peter Jacobs and Shirin Motala

Conference Paper nº 28

III CONFERÊNCIA INTERNACIONAL DO IESE

"MOÇAMBIQUE: ACUMULAÇÃO E TRANSFORMAÇÃO EM CONTEXTO DE CRISE INTERNACIONAL"

(4 & 5 de Setembro de 2012)

FOOD INSECURITY AMONG FEMALE-HEADED HOUSEHOLDS, RAPID FOOD PRICE INFLATION AND THE ECONOMIC DOWNTURN IN SOUTH AFRICA

Peter Jacobs & Shirin Motala[1]

IESE 3RD CONFERENCE

"Mozambique: Accumulation and Transformation in a context of International Crisis"
Maputo 4-5 September 2012

Draft 2: 13 August 2012

[1] Researchers in the Economic Performance and Development research unit in the **Human Sciences Research Council (HSRC)**, Private Bag X9182, Cape Town, 8000 South Africa. Corresponding author: pjacobs@hsrc.ac.za; Phone: 027 021 466 7849

Abstract

Has the dramatic rise in food price inflation between 2007 and 2009 and the 2008-2009 economic downturn affected experiences of household hunger in South Africa? Two intersecting livelihood shocks- rapid food price inflation and the global economic downturn- affected virtually all South Africans in 2008. The 2008 General Household Surveys (GHS) shows a rise in household experiences of hunger in the order of 2-3 percentage points and female-headed households suffered more than male-headed households. In the first year of the crises, female-headed households substantially raised the amount of money spend on food and the share of food expenditure in their total spending basket dramatically increased. This suggests that households were switching larger portions of their total household spending towards food- signaling a coping strategy to counter a severe livelihood shock. Women-headed households living in traditional huts in predominantly rural provinces of Eastern Cape and KwaZulu-Natal experienced the sharpest rise in hunger. Even households dependent on salaries and wages reported increasing experiences of moderate hunger. The policy implication is that gender-based targeting in food security policies must incorporate these additional determinants if they are to effectively address transitory food insecurity induced by similar livelihood shocks.

Key words: household hunger, location, food spending, women, food price inflation, economic crisis

5,800 words including abstract (200 words)

HOUSEHOLD FOOD INSECURITY, RAPID FOOD PRICE INFLATION AND THE ECONOMIC DOWNTURN IN SOUTH AFRICA

1. Introduction

The combined impacts of two intersecting livelihood shocks- rapid food price inflation and the global economic downturn- affected virtually all South Africans in 2008. Evidence of sharply rising food prices- particularly retail prices of staple grains & cereals, most vegetables and meats- had already become visible already towards the end of 2007[2]. More recent statistics highlight that soaring food price inflation persisted throughout 2008 and only started slowing or flattening out towards the middle of 2009. What this means is that although farm-gate and producer prices for most agro-foods might have moderated or even fallen, retail prices that average consumers (particularly the poor) had to pay steadily climbed upwards (NAMC 2008, 2009). The food price crisis raised the cost of foods and, consequently, made it increasingly difficult for low-income households to afford their pre-crisis food baskets. South African policy makers and regulatory agencies responded to the domestic food price crisis through several interventions. The Competition Commission, for instance, launched a series of investigations into what it perceived to be the driving forces behind the growing gap between primary producer (farm-level) prices and retail prices of basic foods (such bread and milk). Moreover, at the time when poor families were battling to counter further slides in their living standards flowing from the food price crisis, the global economic downturn gave an added blow to their livelihoods- especially through job losses. The average household thus had to craft strategies to make ends meet in the context of two overlapping or intersecting crises.

The purpose of this paper is to offer an overview of the impact of rising food prices and the global economic downturn on the food security status of low-income households. It concentrates on female-headed households because official statistics reveal that they are more vulnerable and at risk due to their lower socio-economic status. While adult women constitute around 55% of the South African adult population, women reportedly head roughly 2 in every 5 of the country's households. In fact, the average female-headed household tends to be larger than its male-headed counterpart, is more likely to be caring for one or more children and dependent on social assistance and remittance incomes. Three main determinants of household food security status are investigated: location (geography and dwelling type), main household income sources and adult equivalent expenditure patterns (including food spending).

The paper begins with the context of the crises, drawing on official data to gain insight into the severity of food price inflation and the depth and duration of the economic downturn. It gives a sense of the start and end dates of each crisis by plotting relevant indicators on the same time axis. It then summarizes recent evidence on household food insecurity and household hunger. Keeping the time intervals of the crises firmly in view, the rest of the paper concentrates on the food security

[2] The effects on food insecure and vulnerable families proved to be devastating as manifested in the alarming expansion in the numbers of hungry people globally and large-scale food riots mainly but not exclusively in low- and middle-income countries (UNSCN 2010, Brinkman et al 2010, Ruel et al 2010).

status of female-headed households, tracking annual changes of key variables- location, main household income source and average household expenditures- from 2006 to 2008.

2. Economic downturn and food price inflation

South Africa has experienced two major waves of rapid food price inflation in the last decade. Figure 1 illustrates that the first wave occurred in 2001-2002 whilst the second wave, the context for this article, started towards the end of 2007 and persisted until mid-2009. A detailed examination of the first wave falls outside the scope of this paper but it might be informative to highlight two of its salient features.

Firstly, during the first wave the steep rise in food costs evidently occurred over a shorter time interval. Secondly, this first food price inflationary wave did not overlap with a sharp and deep economic downturn- based on the standard definition that a recession refers to two consecutive quarters of negative economic growth. These two factors partly explain why we do not observe, at least at a national level, a rise in the numbers and shares of food insecure households similar to the second wave. Notwithstanding this 'unobserved impact', food price rises were significant enough to prompt government to establish the food price monitoring commission, a function which now forms a core responsibility of the National Agricultural Marketing Council (NAMC) (Vink and Kirsten 2003).

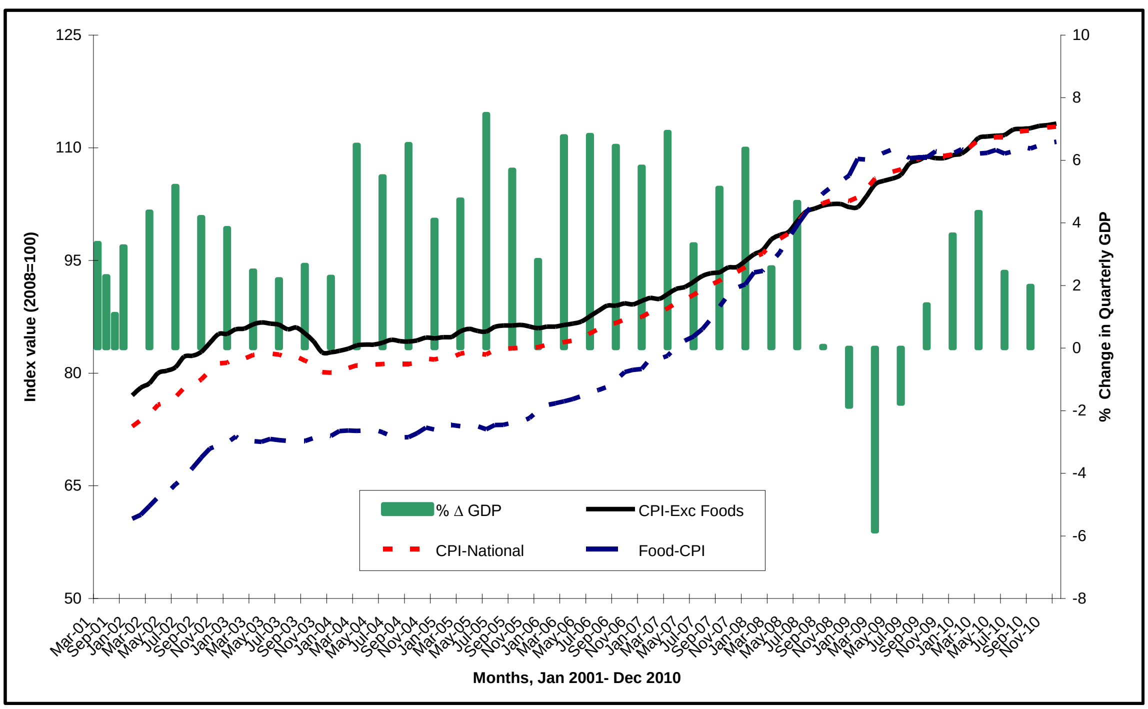

Figure 1: Trends in South Africa's food inflation and quarterly economic growth, Jan 2001 to December 2010

Source: StatsSA electronic database (various years)

Turning to the second wave, it is crucial to highlight that the slowdown in economic growth started in the second half of 2008 whereas lackluster recovery began in the third quarter of 2009. Figure 1 shows that the domestic economic downturn hit bottom in March 2009 when quarterly economic output (measured at constant 2005 prices) fell by nearly 6% whereas in the subsequent quarter the contraction in total output was about 2%. Moreover, food price inflation was accelerating much faster than the general inflation rate from late 2007 onwards. Table 1 summarises the percentage changes in average retail prices of major food groups for 2007 and 2008- measured over a calendar year as well as the last six months of each year (July- December). Aside from fruits in 2008, the average retail prices for all other food groups increased over each full calendar year. Average fruit prices at the retail level started moderating towards the latter part of 2007 were sharply lower in 2008 but then increased during the last six months perhaps due to the seasonal nature of fruit farming. The percentage increases in average fresh meat prices at the retail level have been slower. However, what is clear is that the most sustained and relatively higher average food group price increases were concentrated around staple grains (especially wheat products) and vegetables. NAMC Food Cost Reviews also show that average retail prices for the most popular foods purchased in rural areas were not only higher than in urban areas, but increased slightly faster than in 2008.

Table 1: Percentage change in average retail prices for selected food groups, 2007-2008

Food product group	2007		2008	
	July-Dec	Jan-Dec	July-Dec	Jan-Dec
Wheat	9.19	21.95	1.24	30.41
Maize	-1.13	23.87	17.74	16.7
Fresh vegetables	9.61	26.17	14.01	11.78
Processed Vegetables	2.03	2.03	0.44	14.91
Fresh meat	8.53	12.5	5.23	6.44
Processed Meat	-2.14	7.47	8.06	16.03
Fruit	16.99	21.14	11.38	-8.24

Source: NAMC (2007, 2008) Food Cost Reviews

3. Household hunger data and questions for analysis

Our main goal is to offer a snapshot of year-on-year shifts in reported household hunger from 2006 through 2008. Over these three years it is possible to show how the food price crisis and global economic downturn might have influenced experiences of hunger in female-headed households. Two hunger-scale questions, to separate experiences of hunger among adults and children, have been repeated in the annual General Household Survey (GHS) from 2002 through 2008[3]:

- "In the past 12 months, did any adult (18 years and older) in this household go hungry because there wasn't enough food?"

[3] Over the following two survey years, in 2009 and 2010, this part of the survey questionnaire was completely revised. The revised section now directly couples the lack of access to enough food in the household to insufficient income to purchase food. Furthermore, the revisions included an expanded hunger scale question, but dropped any explicit distinctions of food security experiences of adults from children in the same household. See the UNSCN (2010:81) for globally accepted definitions of food and nutrition security concepts.

- "In the past 12 months, did any child (17 years or younger) in this household go hungry because there wasn't enough food"

The questions are subjective in the sense that they ask the respondent to rank perceptions of hunger within the household according to the following scale: *Never, Seldom, Sometimes, Often and Always*. These frequency scales measure how many times in the past year any adult or child members of the household went hungry. An informative way to group the responses and reduce the loss of richness in information might be to use the following three categories: 'never', 'seldom/sometimes' and 'often/always'. Shorthand names for the last two categories are 'moderate' and 'severe' hunger, respectively (Aliber 2009).

Reviewing available evidence for all South African households for the period 2002 to 2007, it is clear that there has been a decline in households with hungry children and adults (StatsSA, various years). In 2002, for example, 70% of households reported that neither adults nor children experienced hunger. Roughly 24% of households reported that children or adults 'seldom/sometimes' (moderate) went hungry whereas on 6% reported 'often/always' (severe) hungry. By 2007, the share of households experiencing moderate hunger had fallen to roughly 12% whereas severe hunger was 2%. Households with hungry children and adults have evidently shifted either into lower levels of severity (or moderate hunger) or into the 'never hungry' category. However, in-depth statistical analysis required to explain this movement into and out of distinct hunger bands based on available data[4] falls outside the scope of this article.

What if any changes occurred in household hunger after 2007? By 2008, the proportion/share of households in which adults or children never went hungry had begun to decline. At the national level, this amounted to a fall of roughly 2-3 percentage points (from 85% to 82%), with a much larger drop for lower-income households. Over the same period, the shares of households reporting 'seldom/sometimes' (from 13% to 15%) and 'often/always' (from 2% to 3%) hungry increased. Even though not directly comparable to the previous surveys, the latest GHS reveals that 20% of all households ran out of money to buy food in 2009 and that 18% of households skipped meals in 2009 because there was not enough food in the house (StatsSA 2010). What this suggests is that the economic downturn and food price inflation probably pushed households into moderate rather than serious hunger.

4. Location affects hunger status

Location is a critical determinant of household food security status and it is worth looking at variations in reported incidents of hunger based on available spatial information. With few exceptions, at the provincial level, a constantly rising share of households with children and adults never experienced hunger until 2007. Western Cape and Gauteng are exceptions in that the shares of households without hungry children or adults consistently range above 80%. It is interesting to note that during the first wave of food price inflation (2002-2003), this provincial picture of the data suggest improvement in household hunger status in 4 out of 9 provinces. However, during the second wave food price crisis, the 'never hungry' household shares fell in at least 7 out of 9

[4] Aliber (2009) exploited the small rotating panel of households sampled in the GHS every year to give some sense of movements into and out of the reported experiences of hunger.

provinces (with falls in Eastern Cape dating back to 2006) meaning that more households experiencing moderate and severe hunger.

Numerous studies have demonstrated that location affects the food security status of households (NAMC 2009, Aliber 2009, Jacobs 2009, Oldewage-Theron et al 2006). There is great unevenness in the patterns of household hunger across space and time, but locations with fewer economic opportunities, weak social protection and networks ('social capital') have higher degrees of food insecurity. The NAMC (2009), for instance, reports evidence to show that on average food prices in rural areas are higher than in urban areas, thus raising the relative and absolute cost of living in rural areas (see tables in the appendix). Findings from studies by Aliber (2009) and Jacobs (2009), that compare which rural and urban households might be able to afford similar food baskets, found household food insecurity to be higher in rural areas primarily because it costs substantially more to access food in rural localities. Aliber (2009) went further by examining the spatial distribution of hunger across urban and rural municipal districts, including chief metropolitan hubs. He found substantial evidence of hunger in urban informal settlements over the years when official data allowed for this low level of disaggregated spatial analysis.

The 2008 GHS reported information for slightly more than 13 million households, with women heading 2 out of every 5 families (or 39% of all households). In 2008, the top 3 provinces with the largest numbers of female-headed households were, in descending order: KwaZulu-Natal (~1 million households), Gauteng (~900,000) and Eastern Cape (~800,000). We calculated a similar ranking for male-headed households: Gauteng (~2.3 million), KwaZulu-Natal (~1.4 million) and Western Cape (~990,000).

Reported experiences of hunger, based on the gender of household heads, display considerable variation according to table 2. On average, female-headed households are less likely than male-headed households to 'never' experience adult hunger: 80% of female headed households reported that no adult went hungry in the year prior to the survey compared to 85% of male-headed households.

A coarse interpretation of this finding suggests that roughly 20% of female-headed households reported that adults in the family experienced hunger in the last year compared to 15% for male-headed households- if we ignore the degree of severity of hunger. Provinces with the highest shares of female-headed households without adult hunger were Limpopo (88%) followed by Western Cape (85%); whilst for male-headed households, Western Cape and Gauteng dominated with about 89%.

People in Limpopo reside mainly in rural areas. However, Limpopo ranks among predominantly urbanized provinces with comparatively lower levels of hungry adult households. Reported experiences of hunger in this largely rural province are relatively lower than other provinces with large numbers of households living in rural localities. It is interesting to note that substantial shares of female-headed households in Western Cape and Gauteng reported moderate and serious hunger among adults, albeit not as severe as in mainly rural provinces. Turning to experiences of moderately and seriously hungry adults in various provinces, there appears to be marginal differences between male and female headed households across the following provinces: North West, Eastern Cape and KwaZulu-Natal.

Table 2: Numbers and shares of male and female headed households reporting adults hungry by Province, 2008

Province	N Households	Never Hungry		Seldom/Sometimes Hungry		Often/Always Hungry	
	Share (row)	Male head	Female head	Male head	Female head	Male head	Female head
Western Cape	N	885,187	398,627	87,508	57,458	21,277	13,622
	%	*89.06*	*84.87*	*8.8*	*12.23*	*2.14*	*2.9*
Eastern Cape	N	721,405	601,956	154,854	180,217	21,987	24,225
	%	*80.31*	*74.65*	*17.24*	*22.35*	*2.45*	*3.01*
Northern Cape	N	159,570	89,200	22,459	16,947	4,191	1,623
	%	*85.69*	*82.77*	*12.06*	*15.73*	*2.25*	*1.51*
Free State	N	422,311	285,630	50,246	50,718	8,868	6,638
	%	*87.72*	*83.28*	*10.43*	*14.78*	*1.85*	*1.93*
Kwazulu-Natal	N	1,139,706	839,133	184,597	220,539	28,639	35,019
	%	*84.24*	*76.65*	*13.64*	*20.15*	*2.12*	*3.2*
North West	N	503,150	231,385	115,603	74,822	24,058	24,807
	%	*78.27*	*69.9*	*17.99*	*22.6*	*3.74*	*7.5*
Gauteng	N	2,021,476	768,765	216,391	131,301	38,849	24,501
	%	*88.79*	*83.15*	*9.51*	*14.2*	*1.71*	*2.65*
Mpumalanga	N	432,484	309,250	80,247	65,196	10,829	9,462
	%	*82.6*	*80.55*	*15.33*	*16.98*	*2.07*	*2.46*
Limpopo	N	543,604	598,520	66,944	72,732	8,065	8,519
	%	*87.87*	*88.05*	*10.82*	*10.7*	*1.30*	*1.25*
Total	N	6,828,893	4,122,466	978,849	869,930	166,763	148,416
	%	*85.63*	*80.19*	*12.28*	*16.92*	*2.09*	*2.88*

Source: StatsSA, 2008 GHS

As mentioned above, the uneven spatial distribution of household food insecurity is well-known. However, the 2008 GHS does not allow us to distinguish rural from urban food insecure households or the extent of hunger in densely populated metropolitan cities from non-metros. One variable which partially helps to gain a more nuanced view about the distribution of household hunger across provinces is the "dwelling type" variable. It isolates at least 4 major dwelling types: formal brick structures (mainly in urban metros), traditional huts (mainly in rural areas), informal backyard shacks (urban metros) and squatter-camp shacks (mainly urban metros). In 2008, at least three out of every four households lived in formal brick structures, with the largest numbers of households living in this dwelling type concentrated in Gauteng, KwaZulu-Natal and Western Cape. Eastern Cape and KwaZulu-Natal accounted for the largest numbers and shares of households living in traditional huts, whilst Gauteng stands far above other provinces in terms of the numbers of shack-dwelling households.

The information reported in table 3 aims to track changes in the numbers and proportion of female headed households in which adults never experienced hunger. In line with the time intervals reported above, we concentrate on changes from 2006 to 2008 to detect the likely impacts of the two intersecting crises on household hunger by dwelling type.

The overall share of female-households without hungry adults increased from 2006 to 2007. But for the 2007-2008 period, this overall share declined by approximately 3 percentage points- with falls in proportions reported across all dwelling types and largely reversing the gains of the year before the crises. Worse affected were female-headed households in traditional huts and informal backyard shacks, reporting increased shares of 5% and 7% respectively between 2007 and 2008. However, their numbers remained relatively small compared to persistent incidents of adult hunger reported in squatter camp shacks.

Table 3: Female-headed households reporting adults never hungry by dwelling, 2006-2008

Major Dwelling Type		**2006**	**2007**	**2008**	***%Δ 2006-2007***	***%Δ 2007-2008***
Formal brick	N	2,643,121	2,766,871	2,977,695	123,750	210,824
structures	%	*84.2*	*86.02*	*83.29*	*1.82*	*-2.73*
	N	566,390	542,208	524,571	-24,182	-17,637
Traditional huts	%	*76.93*	*74.47*	*69.05*	*-2.46*	*-5.42*
Informal backyard	N	135,283	142,322	134,356	7,039	-7,966
shacks	%	*71.15*	*80.94*	*74.17*	*9.79*	*-6.77*
Informal squatter	N	266,857	273,759	246,289	6,902	-27,470
camps	%	*72.86*	*69.43*	*68.59*	*-3.43*	*-0.84*
	N	3,611,651	3,725,160	3,882,911	113,509	157,751
Total	%	*81.5*	*82.51*	*79.65*	*1.01*	***-2.86***

Source: StatsSA (various years) GHS

5. Income sources matter

The GHS identifies the main or primary source of household income and the total amount of household income. It excludes details on specific sources of income flowing into a household which is sharp contrast with the Income and Expenditure Survey (IES) which offers such information but is conducted every five years. The GHS is not a tool to gauge a household's reliance on multiple incomes. Table 4 reports the relationship of between the main source of household income and reported experiences of hunger in 2008. There were slightly more than 13.1 million households in South Africa in 2008, with roughly 8.1 million relying primarily on labour market incomes (or 62% of all households), 3.1 million dependent on social grants (about 24%) and 1.2 mllion receiving remittances (nearly 10%). As to be expected, hunger tends be concentrated in households without income (or who reported zero income during the month prior to the survey). These households actually reported the lowest proportion of 'never hungry' (66%) and the largest share (~10%) of households with seriously hungry adults. Households primarily dependent on salaries and wages, or labour market participation, reported the highest share of 'never' hungry adults (88%). A higher proportion of households dependent on remittances experienced no adult hunger (77%), compared to a slightly lower proportion of those dependent on social grants (75%). However, there appears to be marginal differences in households mainly dependent on these two forms of income reporting moderately and seriously hungry adults.

Table 4: Households reporting experiences of hunger among adults by main (primary) household income source, GHS2008

Household main income source	Never hungry	Seldom hungry	Sometimes hungry	Often hungry	Always hungry	All Households
Salaries & wages	7,175,687	224,358	622,493	79,725	26,153	**8,128,416**
	88.28	*2.76*	*7.66*	*0.98*	*0.32*	
Remittances	947,795	39,550	193,167	22,907	23,865	**1,227,284**
	77.23	*3.22*	*15.74*	*1.87*	*1.94*	
Pensions & Social grants	2,358,809	138,983	504,737	78,937	50,297	**3,131,763**
	75.32	*4.44*	*16.12*	*2.52*	*1.61*	
Farm Income	75,541	1,077	17,733	0	1,625	**95,976**
	78.71	*1.12*	*18.48*	*0*	*1.69*	
Other non-farm incomes	207,405	5,666	35,210	3,596	2,592	**254,469**
	81.51	*2.23*	*13.84*	*1.41*	*1.02*	
Zero/No Incomes	181,709	10,649	54,225	16,571	10,162	**273,316**
	66.48	*3.9*	*19.84*	*6.06*	*3.72*	
Total	**10,946,946**	**420,283**	**1,427,565**	**201,736**	**114,694**	**13,111,224**
	83.49	***3.21***	***10.89***	***1.54***	***0.87***	

Source: StatsSA, 2009, GHS

Against the backdrop of the information on experiences of adult hunger for all households in 2008, table 5 reflects on changes in moderate (seldom/sometimes) and serious (often/always) hunger among adults for female-headed households based on the principal source of income in the household. Due to small and therefore less meaningful information for zero income households and those primarily dependent on farm and other non-farm incomes, table 5 zooms in on the 3 dominant forms of primary household income- salaries and wages, remittances and social grants- for 95% of all households. The year before the crises, meaning 2006-2007, the overall numbers and proportion of female-headed households with adults reporting moderately hungry adults continued to fall, albeit by less than 1% for moderate and serious hunger.

At the start of the crises, however, adult hunger among female-headed households increased. Higher levels of moderate hunger (seldom/sometimes hungry) were reported among both female-headed households primarily dependent on labour market incomes (more than 4% rise in the share) and those dependent on social grant transfers (about 1.5% rise in the share). This reversal more than outweighed the food and nutrition security gains of pre-crises year. However, the overall share of often/always (or seriously) hungry adults in female-headed households based on the primary income increased by 0.25% in the first year of the crises (2007-2008). This evidence confirms an earlier observation that whilst more female-headed households reportedly experienced hunger, the expansion in the share of extreme hunger is evidently smaller across all the dominant primary income sources.

Table 5: Female-headed households reporting adults *seldom/sometimes* and *often/always hungry* by main household income source, 2006-2008

Main income source		2006	2007	2008	%Δ 2006-2007	%Δ 2007-2008
		Adults seldom/sometimes hungry (moderate)				
Salaries & wages	N (Households)	208,380	191,205	310,283		
	%	*10.42*	*8.74*	*13.02*	*-1.68*	*4.28*
Remittances	N (Households)	123,885	123,539	122,747		

	%	*16.79*	*16.86*	*16.97*	*0.07*	*0.11*
Pensions & Social Grants	N (Households)	337,547	330,910	382,167		
	%	*19.29*	*19.86*	*21.34*	*0.57*	*1.48*
Total	N (Households)	714,408	698,185	868,827		
	%	*15.01*	*14.36*	*16.94*	*-0.65*	***2.58***
		Adults often/always hungry (seriously)				
Salaries wages	N (households)	25,635	28,372	35,755		
	%	*1.28*	*1.3*	*1.5*	*0.02*	*0.2*
Remittances	N (households)	27,711	28,764	25,441		
	%	*3.76*	*3.92*	*3.51*	*0.16*	*-0.41*
Pensions & Social Grants	N (households)	84,725	61,035	74,751		
	%	*4.85*	*3.67*	*4.17*	*-1.18*	*0.5*
Total	N (households)	154,973	128,406	148,022		
	%	*3.26*	*2.64*	*2.89*	*-0.62*	*0.25*

Source: StatsSA, various years, GHS

6. Household food expenditure shares

The relationship between hunger and expenditure on food is a topic of ongoing global interest and a major policy concern (Ruel et al 2010, UNSCN 2010). Expenditure information provides some insights into household well-being and coping strategies when they are faced with livelihood shocks. Expenditure on food is inversely related to total household income or expenditure, which means that poorer households spend a larger share of total household spending on food- commonly referred to as the Engel-curve hypothesis. In the context of the food price crisis and the global economic downturn, it is reasonable to expect a household would adjust its expenditure patterns- including the volumes and varieties of foods consumed but the GHS does not report such details. Continuing with our focus on adult hunger in female headed households, we now explore how this experience is related to movements in household expenditures- bearing in mind that female-headed households, on average, have more members, especially children.

Given the general purpose nature of the GHS, it does not ask in-depth questions about expenditure on each food item in the same way as the less frequently conducted IES. Instead the GHS asks households for information about the total expenditure on broadly defined groups of goods and services in the *month before* the survey. In table 6 below, we report this information for all households in 2008. The average monthly food spending per household in 2008 (weighed by adult equivalent scales) was in the order of R374 and this amounted to 50% of total household spending. These averages hide uneven food spending levels and shares across the reported experiences of adult hunger per household. Whilst seriously hungry households reported the lowest absolute amount of monthly spending on food per adult equivalent (R136), these households also reported the highest share of food spending (67%) in the overall household spending basket. The evidence reported in table 7 clearly illustrates this typical Engel curve phenomenon on food expenditure.

What happened in the expenditure patterns among female-headed households across the years under investigation? Although table 6 does not track changes in expenditure over time, but across different degrees of adult hunger, it is interesting to note that female-headed households consistently spent less than the average household on food and total household expenditure (per adult equivalent or ADEQ). During the year preceding the crises, spending on food increased across female-headed households reporting never, moderately and seriously hungry adults. However, the expenditure shares were falling, and this is usually perceived as a sign of rising levels of household welfare. Focusing on the first year of the crises, the complete opposite picture emerges: female-headed households substantially raised the amount of money spend on food. At the same time, the share of food expenditure in their total spending basket dramatically increased. This suggests that households were switching larger portions of their total household spending towards food- signaling a coping strategy to counter a severe livelihood shock.

Table 6: Female-headed household total and food spending information (Adult Equivalent=ADEQ) based on reported adult hunger, 2006-2008

		Adults never hungry			
	2006	**2007**	**2008**	***Δ 2006-2007***	***Δ 2007-2008***
Food spending per ADEQ	234.22	256.80	330.36	22.58	73.56
Average household food spending	514.93	581.83	736.42	66.90	154.59
Food expenditure share (%)	*53.7%*	*50.3%*	*53.2%*	*-3.3%*	*2.9%*
		Adults seldom/sometimes hungry (moderately)			
	2006	**2007**	**2008**	***Δ 2006-2007***	***Δ 2007-2008***
Food spending per ADEQ	138.07	152.30	177.28	14.23	24.98
Average household food spending	360.33	395.73	506.12	35.40	110.39
Food expenditure share (%)	*58.9%*	*57.0%*	*61.0%*	*-1.9%*	*3.9%*
		Adults often/always hungry (seriously)			
	2006	**2007**	**2008**	***Δ 2006-2007***	***Δ 2007-2008***
Food spending per ADEQ	105.10	102.94	131.41	-2.16	28.47
Average household food spending	296.41	312.01	408.52	15.60	96.51
Food expenditure share (%)	*64.0%*	*61.4%*	*61.8%*	*-2.6%*	*0.4%*

Source: StatsSA, various years, GHS

7. Concluding summary

In the last decade, South Africans experienced 2 waves of rapid food price inflation. However, each shock varied in terms of its duration and the knock-on effects on household hunger evidently differed. Official data suggest that during the first wave, 2002-2003, despite the sharp rises in food prices, households did not report any substantial expansion in child and adult hunger. On the contrary, the proportion of households without hungry children and adults constantly expanded until 2007, roughly the start of the second wave. This variation in the household level experiences of hunger is confirmed by a provincial level of analysis of survey data: during the first wave (2002-2003), the shares of households with adults never hungry did not decline, whilst slight falls could be observed for hungry children in 4 out of 9 provinces. In sharp contrast, during the second wave food price crisis, the shares of households in which adults and children experienced hunger increased in at least 7 out of 9 provinces (with falls in Eastern Cape dating back to 2006).

This paper has demonstrated that the knock-on effects of the global food price crisis and the economic downturn contributed to a slight rise in the proportion/share of hungry South African households between 2007 and 2008. Within a year, capturing the early onset of the crisis, the share of hungry families had risen by 2-3 percentage points. However, a larger share of households reported moderate hunger (measured through the share of households reporting seldom/sometimes hungry) compared to those reporting serious hunger (often/always).

Female-headed households, despite being less than 40% of South African households, experienced a disproportionately greater impact of the two interacting crises. The gap between male and female headed households that never experienced adult hunger in 2008 is 5 percentage points, which suggests that female-headed households are more likely than male-headed households to experience hunger. In fact, the chances of female-headed households falling into moderate (~4 percentage points gap) and serious hunger (less than 1 pp gap) are also higher on average.

In terms of location, women-headed households living in traditional huts in predominantly rural provinces of Eastern Cape and KwaZulu-Natal experienced the sharpest rise in hunger. Furthermore, women headed households in squatter settlements in Gauteng and backyard shacks in Western Cape also reported more hungry adults and children. Female-headed households in Limpopo, a predominantly rural province, reported lower shares of hungry households compared to other provinces with relatively large rural sectors. It is interesting to note that substantial shares of female-headed households in Western Cape and Gauteng reported moderate and serious hunger among adults, albeit not as severe as in mainly rural provinces. Using dwelling type as a proxy for location, the gains against hunger in 2 years before the crises are largely reversed. Worse affected were female-headed households in traditional huts and informal backyard shacks, reporting increased shares of 5% and 7% respectively, yet their numbers remained relatively small compared to persistent incidents of adult hunger reported in squatter camp shacks.

Income enables a household to buy food which naturally gives it a critical role in determining quantity (volume) and quality (diverse types) of foods purchased and consumed. The levels of household income directly bear on household food security status. But income sources- particularly salaries and wages, remittances and social grants- also matter because this reveals information about the stability and sustainability of types of incomes flowing into the household. What the available data for 2006-2008 suggest is that all 3 major sources of primary household income have cushioned household level impacts of the intersecting crises. These certainly helped to pull some female-headed households out of serious hunger. Focusing on 2007-2008, however, whilst remittances and social grants accounted for falls among households reporting moderate hunger, a higher proportion of households dependent on salaries and wages reported increasing experiences of moderate hunger.

Whilst the GHS provides only high-level information about total and food expenditure for every household, the analysis of this limited information confirms the basic inverse relationship between household wealth and food spending shares (Engel curve hypothesis). Seriously hungry households, invariably the poorest, reported the lowest absolute amount of monthly spending on food per adult equivalent (R136), as well as the highest share of food spending (67%) in the overall household spending basket. Female-headed households consistently spent less than the average household on food and total household expenditure (per adult equivalent). During the first year of the crises, female-headed households substantially raised the amount of money spend on food. At the same time, the share of food expenditure in their total spending basket dramatically increased. This suggests that households were switching larger portions of their total household spending towards food- signaling a coping strategy to counter a severe livelihood shock.

References

Aliber, M. 2009. *Exploring Statistics South Africa's national household surveys as sources of information about food security and subsistence agriculture*. Unpublished report, Centre for Poverty Employment and Growth, Human Sciences Research Council, Pretoria.

Altman, M., Hart, T. & Jacobs, P. Household. (2009). Food Security Status in South Africa. *Agrekon*. 48(4): 345-361.

Brinkman H-J, S de Pee, I. Sanogo, L.. Subran & M. W. Bloem. 2010. High Food Prices and the Global Financial Crisis Have Reduced Access to Nutritious Food and Worsened Nutritional Status and Health. Journal of Nutrition, 140 (1) January: 153S-161S

DOE (Department of Education) 2009. *Annual Report 2008/2009*. Pretoria: DOE.

DPRU (Development Policy Research Unit) 2009a. Changes in Unemployment, 23 November 2009. *Fact Sheet 2: The Impact of the Economic Recession on the South African Labour Market.* Cape Town: University of Cape Town.

DPRU (Development Policy Research Unit) 2009b. The Impact of the Economic Recession on the Unemployment Insurance Fund (UIF), some results for the period April to August 2009. *Fact Sheet 3: The Impact of the Economic Recession on the South African Labour Market.* Cape Town: University of Cape Town.

Evans, A. 2009. *The Feeding of the Nine Billion: Global Food Security for the 21st Century*. A Chatham House Report. London: The Royal Institute for International Affairs.

Food and Agricultural Organization (FAO). 2009. *The State of Agricultural Commodity Markets.* Rome, Italy: Food and Agricultural Organization of the United Nations.

Hart, T. 2009. Exploring Definitions Of Food Insecurity And Vulnerability: Time To Refocus Assessments. *Agrekon* December 2009

Jacobs, P. 2009. The status of household food security targets in South Africa. *Agrekon* December 2009

Labadarios, D., Swart, R., Maunder, E.M.W., Kruger, H.S., Gericke, G.J., Kuzwayo, P.M.N., Ntsie, P.R., Steyn, N.P., Schloss, I., Dhansay, M.A., Jooste, P.L. & Dannhauser, A. 2008. Executive summary of the National Food Consumption Survey Fortification Baseline (NFCS-FB-I) South Africa, 2005. *South African Journal of Clinical Nutrition,* 21(3) (Suppl. 2): 247–300

Magdoff, F & Tokar, B. 2009. Agriculture and Food in Crisis- An Overview. *Monthly Review* 61 (3) July-August:1-16

NAMC (National Agricultural Marketing Council). 2008. *Annual Food Cost Review 2007*. Pretoria: National Agricultural Marketing Council.

NAMC (National Agricultural Marketing Council). 2009. *Annual Food Cost Review 2008*. Pretoria: National Agricultural Marketing Council.

Palmer K & Sender J (2006). "Prospects for On-Farm Self-Employment and Poverty Reduction: An Analysis of the South African Income and Expenditure Survey 2000," *Journal of Contemporary African Studies*, 24(3): 347-376.

Oldewage-Theron, WH, Dicks, EG & Napier, CE. 2006. Poverty, household food insecurity and nutrition: Coping strategies in an informal settlement in the Vaal Triangle, South Africa. *Public Health,* 120:795–804.

Ruel. M T, J. L. Garrett, C. Hawkes & M. J. Cohen., 2010. The Food, Fuel, and Financial Crises Affect the Urban and Rural Poor Disproportionately: A Review of the Evidence. *Journal of Nutrition,* 140 (1) January: 170S-176S

Statistics South Africa (StatsSA). 2000. Monthly Average Food Prices, January to December (Electronic Excel Files). www.statssa.gov.za/ (accessed 2 September 2009)

Statistics South Africa (StatsSA). 2005. Monthly Average Food Prices, January to December (Electronic Excel Files). www.statssa.gov.za/ (accessed 2 September 2009)

Statistics South Africa (StatsSA). Various years. *General Household Surveys- 2002- 2008* [Datasets in STATA Fromat].

United Nations Standing Committee on Nutrition (UNSCN). 2010. Sixth report on the world nutrition situation. Geneva, Switzerland: UNSCN Secretariat (World Health Organization)

Van der Berg, S. 2006. Public spending and the poor since the transition to democracy. In Bhorat, H. & Kanbur, R. (eds), *Poverty and Policy in Post-apartheid South Africa*, Cape Town: HSRC Press

Vink. N, and J Kirtsen., 2002. Final Report: Pricing Behaviour in the South African Food and Agricultural Sector- A report commissioned by the National Treasury and conducted with additional technical support from the National departments of Agriculture, Trade and Industries and The Competition Commission's Agriculture in the National Economy. June. Pretoria: National Treasury & National Department of Agriculture.

Webb. P., 2010. Medium- to Long-Run Implications of High Food Prices for Global Nutrition. *Journal of Nutrition*, 140 (1) January: 143S-147S

IESE
INSTITUTO DE ESTUDOS SOCIAIS E ECONÓMICOS

Av. Patrice Lumumba, 178 - Maputo
MOÇAMBIQUE

Tel. + 258 21 328894
Fax + 258 21 328895
www.iese.ac.mz